

IN THE CLAIMS

1. (Currently Amended) External door handle, especially for motor vehicles,

- with a stationary bracket (10) attached to the door (11);
- with a grip (20), supported pivotably on the bracket (10);
- with a lock mounted in the door (11), which lock can be switched between a locked and an unlocked position;

- where an actuation (24) of the grip (20) to open the door (11) is nonfunctional in the locked position but functional in the unlocked position; and

- with at least one capacitative electronic sensor circuit (28, 38), which is mounted directly or indirectly on the bracket (10) and which has a first electrode, which is located in the grip (20) and is active in the outside area of the external door handle;

- where the active surface (37) of this first electrode senses the approach of or contact by an authorized person and is therefore called the sensor surface (37); and

- where the authorized person carries with him an active or passive means of identification for access authorization and/or driving authorization for the vehicle;
~~characterized in that~~ wherein

-- at least one second electrode, which is connected to the electronic control circuit (28, 38), is provided on the bracket (10); in that

-- the electronic sensor circuit (28, 38) builds up an electrical coupling field (50.1) at the active surface (35) of the second electrode in the interior of the external door handle, for which reason this active surface on the bracket side is called the exciter surface (35) for the coupling field (50.1); in that

-- at least one third electrode, which is connected to the sensor surface (37) of the first electrode acting in the outside area of the external door handle, is mounted on the grip (20); in that

-- the coupling field (50.1) acts on the active surface (36) of this third electrode, for which reason this active surface on the grip (20) is called the transfer surface (36) for the coupling field (50.1); and in that


-- when the grip (20) is pivoted (24), the exciter surface (35) of the second electrode in the bracket (10) remains stationary, whereas the transfer surface (36) of the third electrode moves concomitantly with the handle (20).

2. (Currently Amended) External door handle according to Claim 1, ~~characterized in that~~ wherein the exciter surface (35) of the second electrode is electrically connected (44) to the capacitative sensor electrode (28, 38).

3. (Currently Amended) External door handle according to Claim 1, ~~characterized in that~~ wherein the transfer surface (36) of the third electrode is electrically connected (34) to the sensor surface (37) of the first electrode, which is active in the outside area of the external door handle.

4. (Currently Amended) External door handle according to ~~one of Claims 1-3,~~ Claim 1, wherein a layer (52) of electrically conductive paint is applied to the exterior surfaces (53) and/or to the interior surfaces of the external door handle, at least in certain defined areas, and in that

-- this paint layer (52) produces the first electrode with its sensor surface (57), the second electrode with the transfer surface, and/or the third electrode with the exciter surface.

5.  (Currently Amended) External door handle according to ~~one of Claims 1-4,~~ Claim 1, wherein an electrically conductive layer of elastic material is applied to the exterior surfaces and/or to the interior surfaces of the external door handle, at least in certain defined areas, and in that

-- this layer produces the first electrode with the sensor surface (57), the second electrode with the transfer surface, and/or the third electrode with the exciter surface.

6. (Currently Amended) External door handle according to ~~one or more of Claims 1-5, characterized in that~~ Claim 1, wherein the external door handle has several separate, outward-acting sensor surfaces (67, 47) for sensing the presence of a hand and/or inward-acting transfer surfaces (56, 46) and/or exciter surfaces (59, 45) for building up the coupling field, and in that these separate sensor surfaces (67, 47), upon contact by or approach of the authorized person, trigger different functions in the lock or in other devices in the vehicle.

7. (Currently Amended) External door handle according to Claim 6, ~~characterized in that~~ wherein one of the sensor surfaces (67) serves to unlock the lock, whereas another (47) serves to lock the lock.

8. (Currently Amended) External door handle according to ~~Claim 6 or Claim 7, characterized in that~~ Claim 6, wherein, upon the approach of or contact by the authorized person, at least one of the sensor surfaces triggers the movement of movable parts in the vehicle in the opening and/or in the closing direction.

9. (Currently Amended) External door handle according to Claim 8, ~~characterized in that~~ wherein the sensor surfaces cause the movable parts to move in the opening direction upon contact by or approach of the authorized person and then in the closing direction upon the next approach or contact.

10. (Currently Amended) External door handle according to ~~Claim 8 or Claim 9~~, ~~characterized in that~~ Claim 8, wherein the movable parts are one or more windows, a sliding roof, a rear hatch, and/or one or more doors of the vehicle.

11. (Currently Amended) External door handle according to ~~one or more of Claims 1-10~~, ~~characterized in that~~ Claim 1, wherein one or more of the outward-acting sensor surfaces (37, 67) are seated on the grip (20).

12. (Currently Amended) External door handle according to ~~one or more of Claims 1-11~~, ~~characterized in that~~ Claim 1, wherein one or more of the sensor surfaces (27, 47, 57) are seated on a cover part (25), which is mounted in the external door handle next to the grip (20).

13. (Currently Amended) External door handle according to ~~one or more of Claims 1-12, characterized in that~~ Claim 1, wherein at least some of the electronic components of the capacitative sensor which serve to lock and/or to unlock the lock and/or to move the movable parts in the vehicle are integrated into the grip or into the interior of the grip of the external door handle.

14. (Currently Amended) External door handle according to ~~one or more of Claims 1-12, characterized in that~~ Claim 1, wherein at least some of the electronic components (28, 38) of the capacitative sensor (electronic sensor circuit 28, 38) which serve to lock and/or to unlock the lock and/or to move the movable components in the vehicle, are mounted either directly or indirectly (30) on the bracket (11).

15. (Currently Amended) External door handle according to Claim 14, ~~characterized in that~~ wherein the electronic sensor circuits (28, 38) are located in a housing unit (30), which is seated on the bracket (11).

16. (Currently Amended) External door handle according to Claim 15, ~~characterized in that~~ wherein the housing unit (30) is prefabricated and can be attached to the inward-facing (26) of the bracket (11).

17. (Currently Amended) External door handle according to ~~Claim 15 or Claim 16, characterized in that~~ Claim 15, wherein the housing unit (30) is prefabricated and is attached in the area of a barrel (17) mounted on the bracket,

-- where the barrel (17) is mounted in the bracket (11) next to the grip (20).

18. (Currently Amended) External door handle according to ~~one of Claims 15-17, characterized in that~~ Claim 15, wherein the housing unit (30) consists of a main housing (31) and a projecting housing finger (32); and in that

-- the end (33) of the finger extends into the outer area (25) of the external door handle, where it has an outward-acting sensor surface (27) for triggering the locking of the lock.

19. (Currently Amended) External door handle according to Claim 18, ~~characterized in that~~ wherein the electronic sensor circuit (28, 38) is integrated into the main housing (31) of the housing unit (30),

-- whereas the housing finger (32) can be inserted through an opening (29) in the bracket (11) and through a hole in the outer housing skin (30) of the door.

20. (Currently Amended) External door handle according to ~~Claim 18 or Claim 19, characterized in that~~ Claim 18, wherein the housing unit (30) can be installed on the inward-facing surface (26) of the bracket (11) mounted in the door and/or removed afterwards from the interior (11) of the door.

21. (Currently Amended) External door handle according to ~~one or more of Claims 1-20, characterized in that~~ Claim 1, wherein the grip consists of a pull-type grip (20), which is supported (15) at one end (21) on the bracket (11), whereas its other end (22) has an arm (23), which cooperates with the lock; and in that

-- the housing finger (32) is located next to the arm (23).

22. (Currently Amended) External door handle according to Claim 21, ~~characterized in that~~ wherein the transfer surface (36) of the third electrode for the electrical coupling field (50.1) is located on the inner end of the arm (23) of the grip (20).

23. (Currently Amended) External door handle according to ~~Claim 21 or Claim 22, characterized in that~~ Claim 21, wherein the exciter surface (35) of the second electrode for the electrical coupling field (50.1) is located in the housing unit (30), which is seated on the rear surface (26) of the bracket (11).